

REMARKS

Claims 1-8, 10-18, and 21-24 remain in this application. Claims 14, 15, 18 and 21 stand withdrawn from prosecution. Applicant respectfully requests continued examination. A formal Request for Continued Examination is submitted herewith.

Claim 1 was rejected under 35 USC § 103(a) as unpatentable over U.S. Patent No. 6,886,098 (“*Benaloh*”) in view of “In-flight Entertainment Whitepaper” (the “*Whitepaper*”), and Claims 1-5, 8, 11-12, 16-17, and 22-24 were rejected under 35 USC § 103(a) as unpatentable over *Benaloh* in view of U.S. Patent No. 6,671,589 (“*Holst*”).

Applicant respectfully traverses. To establish a prima facie case of obviousness, the Office Action must show that the prior art reference or references, when combined, teach or suggest all the claim limitations.

With respect to independent Claims 1 and 16, Applicant respectfully submits that neither *Benaloh*, the *Whitepaper*, or *Holst*, separately, or in combination, teach or suggest the limitation of “a wireless communication unit for receiving an information signal from the control processor unit and sending a signal to a receiving wireless communication unit using a low-bandwidth cellular channel.¹”

The specification discloses that “[t]he wireless communication unit 302 is used to transport data over a relatively low-bandwidth cellular channel. The wireless connection is preferably a tri-band (900, 1800, and 1900 Mhz) cellular data link.” *Paragraph 0053*.

The low-bandwidth cellular channel is used to provide a wireless link for worldwide, bi-directional internet access to the aircraft when, for example, the aircraft is parked at the terminal gate, the parking brake is set, or a cabin door is open. *Id.* The wireless link is used to transport data to a web-based internet system which allows, for example, an in-flight entertainment (IFE)

manager to determine the delivery status of information content on various aircraft, as well as initiate change such as cryptographic key updates and programming changes. *See Paragraph 0052.*

Benaloh and the *Whitepaper* fail to teach or suggest a “wireless communication unit”, much less a wireless communication unit which transmits data using a “low-bandwidth cellular channel.” *Holst* fails to overcome the deficiencies of *Benaloh* and the *Whitepaper*.

Holst at Column 3, Lines 50-61 discloses that “an Ethernet connection 26 is established directly to a wireless spread spectrum transceiver located on-board the aircraft.” Furthermore, Figure 4 shows a ground-based network operations center 407 connected to on-aircraft external 403 and internal 404 cabin communication transceivers by way of 802.11b spread spectrum wireless connections.

The IEEE 802.11b protocol is a high-bandwidth, high-data rate wireless communication standard which carries out wireless local area network computer communication in the 2.4 Gigahertz frequency band. *See Appendix A, Page 6.* The 802.11b protocol has a limited geographic range, which can be as low as 30 meters, and is ideal in high-traffic environments where multiple users can connect to a network using a limited number of access points. *See id.* The 802.11b protocol suffers from interference by radio frequency (RF) emissions from, for example, Bluetooth devices, 2.4Ghz cordless phones, microwaves, and other RF devices. This interference negatively impacts the performance of wireless communications that use the 802.11b protocol. *See Appendix A, Page 13.*

On the other hand, the present invention utilizes a “low-bandwidth cellular” wireless communication link that provides worldwide wireless communications. *See Paragraph 0053.* The wireless communication link of the present invention is preferably a low-bandwidth tri-band (900, 1800, and 1900 Megahertz) cellular data link. The cellular data link of the present invention is used to provide worldwide internet access, and thus, cannot be limited to a geographic area where an 802.11b wireless access point is located. *See id.*

Furthermore, the “low-band cellular” wireless communication link is used to transmit data to an IFE manager for managing, tracking, and updating in-flight programming. *Paragraph 0052.* The cellular data link cannot be subject to interference and signal degradation which the 802.11b protocol is subject to, as the transmitted data is essential for an IFE manager to be able to manage the real-time delivery of content to a mobile fleet.

In contrast, *Holst* utilizes a 2.5 Gigahertz 802.11b spread spectrum connection that is used for high-bandwidth data transfers, such as for streaming pictures and movies from the Internet. *See Appendix A, Pages 6-7.* As discussed above, the 802.11b protocol is limited to a geographic area where an 802.11b wireless access point is located. Further, the 802.11b is subject to unwanted interference which can impact the signal and data transmission quality.

One skilled in the art of wireless communications would not look to the 2.5 Gigahertz, high-bandwidth, high-data rate communication protocol disclosed in *Holst* to teach or suggest the wireless communication unit of the present invention which uses at most a 1900 Megahertz “low-bandwidth cellular channel” to transmit data. Thus, *Holst* certainly does not teach or suggest “using a low-bandwidth cellular channel” to transmit data over a wireless communication channel.

Thus, Applicant respectfully submits that Claims 1 and 16 are novel and not obvious in view of *Benaloh*, the *Whitepaper*, and *Holst*, separately, or in combination. Applicant respectfully requests that the rejection of Claims 1 and 16 be withdrawn.

Regarding dependent Claims 2-8, 10-13, and 22-24, and dependent Claim 17, they depend from independent Claims 1 and 16, respectively, which are believed to be patentable. Thus, dependent Claims 2-8, 10-13, and 22-24, and dependent Claim 17 are also novel and not obvious in view of *Benaloh*, the *Whitepaper*, and *Holst*.

Furthermore, with respect to amended independent Claim 16, Applicant respectfully submits that *Benaloh*, the *Whitepaper*, and *Holst* fail to teach or suggest the limitation of “outputting the signal with the wireless communication unit to a web-based content management system using a low-bandwidth cellular channel.”

The specification discloses that “[t]he wireless communication unit 302 allows the TDL to reliably exchange information with resources on the internet thereby allowing an in-flight entertainment (IFE) manager to monitor and control the delivery of content in nearly real-time. For example, the IFE manager can use a web-based internet system to determine the delivery status of the information content on each aircraft...[that] allows IFE managers to easily manage the delivery of content to a mobile fleet.” *Paragraph 0052*.

As discussed above, *Benaloh* and the *Whitepaper* fail to teach or suggest a “wireless communication unit.” The *Whitepaper* is cited only for allegedly teaching wireline communications for in-flight entertainment systems. Thus, *Benaloh* and the *Whitepaper*, alone or in combination, fail to teach or suggest “outputting the wireless signal with the wireless communication unit to a web-based content management system using a low-bandwidth cellular channel.” *Holst* fails to overcome the deficiencies of *Benaloh* and the *Whitepaper*.

Holst at Figure 4 shows a ground-based network operations center 407 connected to on-aircraft external 403 and internal 404 cabin communication transceivers by way of 802.11b spread spectrum wireless connections. However, *Holst* does not disclose any details of the ground-based network operations center, and simply states that “[t]he flight performance data can be acquired and transmitted wirelessly to a ground-based system.”

Holst certainly does not teach or suggest a “web-based content management system” which allows an in-flight entertainment manager to manage and track the delivery of content to a mobile fleet.

Thus, Claims 16 is novel and not obvious in view of *Benaloh*, the *Whitepaper*, and *Holst*, separately, or in combination. Applicant respectfully requests that the rejection of Claim 16 be withdrawn.

Regarding dependent Claim 17, it depends from independent 16, which is believed to be patentable. Thus, dependent Claim 17 is also novel and not-obvious in view of *Benaloh*, the *Whitepaper*, and *Holst*.

CONCLUSION

In light of the above amendment and remarks, applicant respectfully submits that all the claims remaining in the application are allowable, and respectfully requests that the claims be allowed and the application passed to issue.

If there are any questions with regards to this response, or if the Examiner believes that a telephone interview will help further prosecution of the application, the Examiner is invited to contact the undersigned at the listed telephone number.

Sincerely,

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